



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,921	12/11/2003	Kristen Matusick	SP02-264A	8597
22928	7590	03/22/2006	EXAMINER	
CORNING INCORPORATED			KIM, ELLEN E	
SP-TI-3-1				
CORNING, NY 14831			ART UNIT	PAPER NUMBER
			2874	

DATE MAILED: 03/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/733,921

Applicant(s)

MATUSICK ET AL.

Examiner

Ellen Kim

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 18-32 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is responsive to Applicant's amendment filed on 12/14/05.

Response to Arguments

Applicant argues that since the lens is defined as having a neck region and a convex region, the thickness of the lens is naturally the thickness of the neck region plus the thickness of the convex region.

Examiner is still confused by the term "thickness of the lens". Applicant's fig. 4C shows the "T". It is not clear whether the "thickness of the lens" is the value of "T" or the height of the neck region of the lens plus the diameter of the convex portion.

Applicant also argues that the "beam waist" is a standard term used to describe the optical performance of a lens.

Examiner notes that the term "beam waist" should be defined in the claim so that the claimed structure is clearly defined by the term. For the examination purpose, the beam waist is considered to be an inherent feature if all the other claimed structural limitations in the claims are met by the reference.

Applicant further argues that Russo et al does not have a neck region or the neck region is indistinguishable from the optical fiber and has the same diameter as the optical fiber.

Examiner notes that Russo et al clearly shows the lens portion 10 [convex region] and neck portion [without the covering 4] **formed** at an end of the optical fiber [with covering 4], and the neck region has an overall diameter smaller than an outer diameter of the optical fiber. Examiner only considers the claimed structural limitations.

Applicant also argues that the tapered region in Khoe et al being part of the optical fiber, has a wave guiding core. The neck region of the lens of the instant application does not have a wave guiding core.

Examiner notes that Applicant fails to claim the neck region of the lens without having any wave guiding core. Examiner only considers what has been claimed in the claims.

Claim Objections

Claims 6, and 14-16 are objected to because of the following informalities.
Appropriate correction is required.

Applicant claims in claim 6 that "...thickness of the lens..." and in claim 5 "...radius of curvature...". It is not clear what is the different between the "thickness of the lens" and the "radius of curvature of the lens".

The similar limitation is noticed in claim 8.

In re claims 14, 15, and 16, Applicant fails to define the definition of the "beam waist of the lens" in the claim. It is not clear what is the "beam waist of the lens".

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 7, 9, and 14-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Russo et al [USPAT 4,678,268].

In re claim 1, Russo et al disclose a lensed fiber comprising:

An optical fiber (numeral 1 and 4 in fig. 3); and

A lens having a neck region (narrow portion of 1 after peeling off portion 4) and a convex region (10) formed at an end of the optical fiber, the neck region having an overall diameter smaller than an outer diameter of the optical fiber.

In re claims 2, 3, 5, 7 and 3, Russo et al teach at column 4, lines 13-31, fig. 5 and fig. 6 that the diameter of the lens can adjusted and can be smaller than the outer diameter of the optical fiber.

In re claim 4, Russo et al teach at column 1, lines 45-49 and column 2, lines 37-57 that different diameter size of the optical fiber can be utilized, and specifically teach that the smaller than 150 μm optical fiber can be utilized.

In re claims 12-17, Russo et al show all the claimed structure of the optical device, therefore, the claimed characteristics of the optical fiber is considered to be inherently met by Russo et al device.

Claims 1, 2, and 9-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Khoe et al [USPAT 4,721,353].

Khoe et al disclose a lensed optical fiber comprising:

An optical fiber 11; and

A lens having a tapered neck region 12 and a convex region 3 formed at an end of the optical fiber, the neck region having an overall diameter smaller than an outer diameter of the optical fiber.

In re claims 12-17, Khoe et al show all the claimed structure of the optical device, therefore, the claimed characteristics of the optical fiber is considered to be inherently met by Russo et al device.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6, 8, 10, 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Russo et al.

Russo et al teach at column 4, lines 13-31, fig. 5 and fig. 6 that the diameter of the lens can adjusted and can be smaller than the outer diameter of the optical fiber.

In re claim 10, the claimed method of forming the device, such as "splice" is not germane to the issue of patentability of the device itself. Therefore this limitation has not given any patentable weight.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

Art Unit: 2874

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

For all official patent application related correspondence for organizations reporting to the Commissioner of Patents:

- Correspondence that is transmitted by facsimile must be directed to the central facsimile number, (703) 872-9306.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ellen Kim whose telephone number is (571) 272-2349. The examiner can normally be reached on Monday through Thursday.

Application/Control Number: 10/733,921

Page 8

Art Unit: 2874

Ellen E. Kim

Primary Examiner

March 15, 2006/EK

A handwritten signature in black ink, appearing to read "Ellen Kim", is written over the printed name and title.